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OF THE  
CALIFORNIA ACADEMY OF SCIENCES  
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APRIL 28, 1926

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**XIX**  
**REPORT OF THE PRESIDENT OF THE ACADEMY**  
**FOR THE YEAR 1925**

BY  
C. E. GRUNSKY  
*President of the Academy*

It is with pleasure and satisfaction that your President again calls attention in this Annual Report to progress made and to work done by the Academy, through its staff of scientists and their assistants, during the year 1925.

There has been but slight change in membership which now stands at 1099. The accession of new members and losses are shown in the following analysis:

Members on January 1, 1925.....	1107
New members, during 1925.....	77
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Total .....	1184
Deceased in 1925.....	16
Resigned .....	15
Dropped for non-payment of dues.....	54
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Total .....	85
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Members on January 1, 1925.....	1099

April 28, 1926

The membership consists of:

Patrons .....	16
Honorary members .....	23
Life members .....	87
Fellows .....	23
Members .....	950
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Total .....	1099

The Academy carries on its list of patrons the following names:

*Living*

Mr. George C. Beckley	Mr. A. Kingsley Macomber
Dr. Frank E. Blaisdell, Sr.	Mr. John W. Mailliard
Mr. William B. Bourn	Mr. Joseph Mailliard
Mr. William H. Crocker	Mr. M. Hall McAllister
Mr. Peter F. Dunne	Mr. Ogden Mills
Dr. Barton Warren Evermann	Mr. William C. Van Antwerp
Mr. Herbert Fleishhacker	Mr. Edward P. Van Duzee
Mr. Joseph D. Grant	Dr. E. C. Van Dyke

*Deceased*

Mr. William Alvord	Mr. James Lick
Mr. Charles Crocker	Mr. Alexander F. Morrison
Mr. John W. Hendrie	Mr. Amariah Pierce
Mr. Henry M. Holbrook	Mr. Ignatz Steinhart
Mrs. Charlotte Hosmer	Dr. John Van Denburgh

The following list of members deceased during the year includes a number of those who have been active at one time or another in the Academy or who have in other ways than giving of their time aided the Academy in its scientific work. Mr. T. S. Brandegee and Miss Catherine Hittell are notable in this class and will be kept in grateful memory by all who knew them. And then there are many whose prominence among their fellow-men and whose friendly good will and active cooperation have been of material assistance to the Academy. I need mention only such names as Mr. John A. Hooper, Mr. M. H. de Young, Mr. I. H. Morse, and others. It was with particular regret that news of the passing of Prof. José M. Gallegos in September, 1925, was received so soon after his participa-

tion as a scientist delegated by Mexico in the Academy's Revillagigedo expedition.

*Deceased*

Mr. George H. Anderson.....	Member.....	September 12, 1925
Mr. T. S. Brandegeee.....	Life.....	April 8, 1925
Mr. John I. Carlson.....	Member.....	January 10, 1925
Mr. Walter E. Dean.....	Life.....	July 13, 1925
Mr. M. H. de Young.....	Member.....	February 15, 1925
Mr. Kimball G. Easton.....	Member.....	March 22, 1925
Prof. José M. Gallegos... ..	Member.....	September 24, 1925
Miss Catherine H. Hittell.....	Member.....	April 18, 1925
Mr. John A. Hooper.....	Member.....	1925
Mr. Ira Kahn.....	Member.....	September 11, 1925
Miss Gertrude Twyman.....	Member.....	1925
Sr. Don Manuel Villada.....	Honorary.....	1925

The following whose deaths occurred on the dates named are here recorded for the first time:

Dr. Gustav Hambach.....	Member.....	June 20, 1922
Mr. John L. Koster.....	Member.....	December 1, 1923

In the year 1925 eleven free lectures were delivered at the stated meetings of the Academy, as follows:

- JANUARY 7.....A Naturalist's Visit to northern British Columbia, illustrated, by Mr. H. S. Swarth, Curator of Birds, Museum of Vertebrate Zoology, University of California.
- MARCH 4.....Salt Water Barriers, illustrated, by Dr. C. E. Grunsky, President California Academy of Sciences.
- APRIL 1.....Symposium on the proposed Revillagigedos Expedition of the California Academy of Sciences, participated in by various members of the Museum staff.
- MAY 6.....The Wild Flowers of Western Canada, illustrated with colored slides, by Mr. W. C. McCalla, Edmonton, Alberta, Canada.
- JUNE 3.....San Francisco during the Seventies, illustrated, by Mr. Charles B. Turrill, San Francisco, California.
- JULY 1.....An Account of the Recent Revillagigedo Islands Expedition, illustrated, by Dr. G. Dallas Hanna, Curator of the Department of Paleontology, California Academy of Sciences.
- AUGUST 5.....Flowers of the northern Sierra Nevada, illustrated, by Miss Alice Eastwood, Curator of Botany, California Academy of Sciences.
- SEPTEMBER 2...Fish and Game Protection, illustrated, by Mr. E. R. Zion, San Francisco, California.

- OCTOBER 7.....Ears, by Dr. J. Sterling Kingsley, Berkeley, California.  
NOVEMBER 4....The Biology of Our Introduced Rats, illustrated, by Mr. Tracy I. Storer, Assistant Professor of Zoology, University of California.  
DECEMBER 2....Number, by Dr. Rufus L. Green, Professor of Mathematics, Stanford University.

The Sunday afternoon lectures at the Museum building were continued throughout the year except during the vacation months of summer. Despite the inadequacy of the temporary lecture room, the attendance at these lectures has been satisfactory. These lectures have included the following:

- JANUARY 4.....The California School System and Teacher Training, by Dr. Archibald B. Anderson, President, San Francisco State Teachers' College.  
JANUARY 11....The Training of Teachers for the Public Schools, by Dr. W. W. Kemp, Dean of the School of Education, University of California.  
JANUARY 18...Answering the Critics of the Public Schools, by Dr. Harry B. Wilson, Superintendent, Berkeley Public Schools.  
JANUARY 25....The Aim of High School Education and how we are attaining it, by Mr. J. P. Nourse, Principal, Galileo High School, San Francisco.  
FEBRUARY 1....Knowing How and Why, by Dr. Ray Lyman Wilbur, President of Stanford University.  
FEBRUARY 8....California's Program of Education, by Hon. Will C. Wood, State Superintendent of Public Instruction.  
FEBRUARY 15...Early Spring Flowers of the Bay region, illustrated, by Miss Alice Eastwood, Curator of Botany, California Academy of Sciences.  
MARCH 1.....Why Education in America is Difficult, by Dr. Ellwood P. Cubberley, Dean of the School of Education, Stanford University.  
MARCH 8.....The Financial Aspects of Education in California, by Mr. A. R. Heron, Assistant Superintendent Public Instruction, Sacramento.  
MARCH 15.....Peoples of the Philippines, illustrated, by Prof. E. D. Merrill, Dean of the College of Agriculture, University of California.  
MARCH 22.....Bird and Animal Friends, illustrated with motion pictures, by Mr. William L. Finley, expert photographer of wild animal life and noted naturalist and lecturer; and Cruising the British Columbia Coast, illustrated with motion pictures, by Mr. Arthur Newton Pack, Secretary, American Nature Association and Associate Editor of Nature Magazine.

- MARCH 29..... Corals: What they are, what they eat, and how they grow, illustrated, by Dr. T. Wayland Vaughan, Director, Scripps Institution for Biological Research, La Jolla, California.
- APRIL 5..... A Glimpse of the State University at work, by Dr. Monroe E. Deutsch, Dean of the College of Letters and Science, University of California.
- APRIL 12..... The Lure of California's National Forests, illustrated, by Mr. Wallace Hutchinson, United States Forest Service, San Francisco.
- APRIL 19..... The Life of the Forest, by Dr. E. P. Meinecke, Consulting Pathologist, United States Forest Service, San Francisco.
- APRIL 26..... California's Forest Fire Problem, illustrated, by Mr. Paul G. Redington, District Forester, United States Forest Service, San Francisco.
- MAY 3..... National Forest Highways and Byways, illustrated, by Mr. Frank Bonner, United States Forest Service, San Francisco.
- MAY 10..... Conceptions of the Earth as a Whole: Measuring the Earth and Mapping its Surface, illustrated, by Dr. George F. McEwen, Oceanographer and Curator of the Oceanographic Museum, Scripps Institution for Biological Research, La Jolla, California.
- OCTOBER 4..... Travel and Big Game Hunting in East Africa, illustrated, by Major Norman B. Livermore, San Francisco, Calif.
- OCTOBER 11.... The Plants and Animals of Fanning and Washington Islands, Equatorial Coral Islands of the Pacific, illustrated, by Dr. W. B. Herms, Professor of Parasitology, University of California, Berkeley, California.
- OCTOBER 18.... Among the Gilbertese Natives of Certain Equatorial Coral Islands of the Mid-Pacific Ocean, illustrated, by Dr. W. B. Herms, Professor of Parasitology, University of California, Berkeley, California.
- OCTOBER 25.... The Alps of the King-Kern Divide, illustrated, by Mr. John J. Mazza, San Francisco, Calif.
- NOVEMBER 1.... Some Interesting Animals, a chalk talk for the children, illustrated, by Dr. J. Sterling Kingsley, Berkeley, California.
- NOVEMBER 8.... The Biology of Our Introduced Rats, illustrated, by Dr. Tracy I. Storer, Assistant Professor of Zoology, University of California.
- NOVEMBER 15... The Maori, New Zealand Tourist Resorts and the Pacific Islands, illustrated, by Mr. F. E. Tomlinson, Official Publicity Photographer of New Zealand.
- NOVEMBER 22... The High Sierra from Yosemite to Mount Whitney, illustrated, by Mr. Francis P. Farquhar, San Francisco.

- NOVEMBER 29...Timbuctoo and the Land of the Blacks, illustrated, by Dr. David P. Barrows, Professor of Political Science, University of California.
- DECEMBER 6...The People of Santo Domingo, illustrated, by Mr. M. E. Beall, Berkeley, California.
- DECEMBER 13...The Largest and Oldest Living Things in the World, in the Sequoia and General Grant National Parks, illustrated with stereopticon slides, by Colonel John R. White, Superintendent Sequoia and General Grant National Parks.
- DECEMBER 20...The Apache Trail, illustrated with stereopticon slides and motion pictures, by Mr. Harry S. Swarth, Curator of Birds, Museum of Vertebrate Zoology, Berkeley, California.

The continued contribution of the Academy to the advancement of science is evidenced by the following list of publications issued by the Academy in 1925:

- OCCASIONAL PAPERS No. XI—FAUNA AND STRATIGRAPHIC RELATIONS OF THE TEJON EOCENE AT THE TYPE LOCALITY IN KERN COUNTY, CALIFORNIA, by Frank M. Anderson and G. Dallas Hanna.
- Vol. XI, 1921—INDEX, TITLE PAGE AND CONTENTS OF THE PROCEEDINGS OF THE CALIFORNIA ACADEMY OF SCIENCES FOR 1921.
- Vol. XIII, No. 27, pp. 431-440—REPORT OF THE PRESIDENT OF THE ACADEMY FOR THE YEAR 1924, by C. E. Grunsky.
- Vol. XIII, No. 28, pp. 441-494—REPORT OF THE DIRECTOR OF THE MUSEUM FOR THE YEAR 1924, by Barton Warren Evermann.
- Vol. XIII—INDEX, TITLE PAGE AND CONTENTS OF THE PROCEEDINGS OF THE CALIFORNIA ACADEMY OF SCIENCES FOR 1923.
- Vol. XIV, No. 1, pp. 1-35—PECTENS FROM THE TERTIARY OF LOWER CALIFORNIA, by Leo G. Hertlein.
- Vol. XIV, No. 2, pp. 37-75—CONTRIBUTION TO THE TERTIARY PALEONTOLOGY OF PERU, by G. Dallas Hanna and Merle C. Israelsky.
- Vol. XIV, No. 3, pp. 77-81—A NOTE ON TWO OF HYATT'S LIASSIC AMMONITES, by C. H. Crickmay.
- Vol. XIV, No. 4, pp. 83-87—A NEW SPECIES OF MOLLUSK (*Dentalium hannai*) FROM LOWER CALIFORNIA, WITH NOTES ON OTHER FORMS, by Fred Baker.
- Vol. XIV, No. 5, pp. 89-100—CONTRIBUTIONS TO ORIENTAL HERPETOLOGY II. KOREA OR CHOSEN, by Joseph R. Slevin.
- Vol. XIV, No. 6, pp. 101-103—CONTRIBUTIONS TO ORIENTAL HERPETOLOGY III. RUSSIAN ASIA AND MANCHURIA, by Joseph R. Slevin.
- Vol. XIV, No. 7, pp. 105-142—NEW NORTH AMERICAN SPIDERS, by Ralph V. Chamberlin.
- Vol. XIV, No. 8, pp. 143-169—ANATOMY OF LANX, a LIMPET-LIKE LYMNAEID MOLLUSK, by H. Burrington Baker.

- Vol. XIV, No. 9, pp. 171-173—EXPEDITION OF THE CALIFORNIA ACADEMY OF SCIENCES TO THE GULF OF CALIFORNIA IN 1921, THE PHALANGIDA, by Ralph V. Chamberlin.
- Vol. XIV, No. 10, pp. 175-183—SCELLUS VIRAGO Aldrich (A TWO-WINGED FLY) AND TWO FORMS CLOSELY RELATED TO IT, by M. C. Van Duzee.
- Vol. XIV, No. 11, pp. 185-215—BEES IN THE COLLECTION OF CALIFORNIA ACADEMY OF SCIENCES, by T. D. A. Cockerell.
- Vol. XIV, No. 12, pp. 217-275—EXPEDITION TO GUADALUPE ISLAND, MEXICO, IN 1922, GENERAL REPORT, by G. Dallas Hanna.
- Vol. XIV, No. 13, pp. 277-320—EXPEDITION TO GUADALUPE ISLAND, MEXICO, IN 1922, THE BIRDS AND MAMMALS, by A. W. Anthony.
- Vol. XIV, No. 14, pp. 321-343—EXPEDITION TO GUADALUPE ISLAND, MEXICO, IN 1922, THE COLEOPTERA, by Frank E. Blaisdell, Sr.
- Vol. XIV, No. 15, pp. 345-367—ANTHIDIINE BEES IN THE COLLECTION OF THE CALIFORNIA ACADEMY OF SCIENCES, by T. D. A. Cockerell.
- Vol. XIV, No. 16, pp. 369-390—STUDIES IN THE TENEBRIONIDÆ, No. 2, (Coleoptera), by Frank E. Blaisdell, Sr.
- Vol. XIV, No. 17, pp. 391-425—NEW HEMIPTERA FROM WESTERN NORTH AMERICA, by Edward P. Van Duzee.

The present net income of the Academy, apart from funds received from San Francisco for the operation and maintenance of the Steinhart Aquarium, is about \$80,000. Of this amount about \$10,000 is annually applied to a reduction of indebtedness and the rest is expended on scientific research work and the upkeep of the Academy's exhibits. Both the Museum and the Aquarium are open to the public daily without charge.

The wisdom of the arrangement with the lessee of the Academy's Market Street property made in 1909, according to which the rent is readjusted frequently, based on reappraisals of the value of the real estate, is amply demonstrated by the actual result. There was, as the result of such reappraisal in 1924, an increase in income due to this cause alone of \$8,712. The gross income from this property in the year 1926 is estimated at \$92,097 from which, to determine net income (without allowance for depreciation), there should be deducted \$12,925, the interest on the unpaid balance of the loan secured by this property which now stands at \$235,000, it having been reduced \$15,000 in the past year.

The Academy has received a number of valuable bequests and donations during the year which include the bequest of the late Henry M. Holbrook, preliminarily noted in last year's report of the President, of a notable collection of moths and



butterflies together with \$2,000 for the installation of this collection. A very handsome and instructive exhibit has resulted.

Dr. Frank E. Blaisdell (under date of Aug. 22, 1925) presented to the Academy his collection of over 100,000 specimens of Coleoptera. This donation of great scientific value has followed closely that made by Dr. E. C. Van Dyke in December, 1924, which, as noted in last year's report, is also estimated at over 100,000 specimens.

Mr. Edward P. Van Duzee, Curator of Entomology, under date of August 4, 1925, presented to the Academy his collection of more than 30,000 specimens of Hemiptera. This collection probably excels any other collection of this order in this country.

In grateful recognition of these valuable donations Dr. Edward C. Van Dyke, Dr. Frank E. Blaisdell and Mr. Edward P. Van Duzee are now classed as Patrons of the Academy.

Another important contribution to the material in the Department of Entomology was made by John E. Carey in January, 1925. This consists of 500 specimens of Lepidoptera collected in Panama.

Mr. Ogden Mills has added \$1000 to sums previously contributed in order that the setting of the Grizzly Bear habitat group might be improved. The rearrangement of this group is now in progress,—the work being done with funds contributed by Mr. Mills.

The most notable scientific activity of the Academy during the past year was an expedition to the Revillagigedo Islands, of which a detailed account is presented in the report of the Director of the Museum. Thanks to the interest of the Secretary of the Navy, Curtis D. Wilbur, the cooperation and assistance of the United States Navy Department was secured and the U. S. mine sweeper *Ortolan* was detailed to convey the scientists to and from the islands. Sailing on April 15, 1925, each of the islands in the group was visited and the expedition returned on June 12, bringing much new information and valuable collections which will be studied with publication of results in due course.

The Library continues to grow. Many new accessions of valuable publications and occasional rare editions of scientific

books have been made possible by a somewhat larger allotment of funds for the purpose than usually available.

The Steinhart Aquarium has been operated with scrupulous adherence to the requirement that expenditure be kept within the amounts of funds allotted by the City and County of San Francisco for its operation. The Academy has exercised great care in keeping its requests for funds as low as compatible with efficient management. Nevertheless, the allotted funds have been somewhat below the actual needs, with the result that there has had to be some curtailing of the program of collecting specimens. The continued popularity of the Aquarium evidenced by large attendance is gratifying proof of its value as an educational adjunct to the Academy and as a source of much pleasure and benefit to multitudes of people.

The Academy, through a Committee under the leadership of Mr. M. Hall McAllister, continues, among other activities, its cooperation with other organizations in the preservation of wild life. In this matter, as in any others related to the natural sciences, the Academy is at all times ready to act as trustee and would be only too glad to be placed in command of facilities that would permit large increase of its activities.

The need for more space for the research work of the curators and their assistants and for natural history exhibits, and the need of an adequate auditorium, grows more pressing from day to day. Year after year in our annual reports attention has been called to this pressing requirement to permit the Academy to function properly. Aside from a small annual sinking fund (about \$10,000) which is being applied to a reduction of the indebtedness which was incurred when the Academy's Market Street property was improved by the erection of a modern 10-story office building, all of the Academy's income is expended in research work and in maintaining and adding to its research collections and exhibits. The public is, perhaps, not as fully advised of the contributions which the Academy has made to the advancement of science as it should be. The results of studies along lines of natural history do not as a rule lend themselves to spectacular display. The hardworking entomologist, ornithologist, botanist, herpetologist, paleontologist, ichthyologist, as the case may be, is content to find the results of his studies made of record in printed

form for the use and benefit of mankind. His is the satisfaction in the doing and in the knowledge that in some measure he has broadened the foundation on which civilization rests. The great mass of the people, however, do not see what is being so laboriously and so well done on most slender means.

As this year marks the tenth anniversary of the completion and opening of the first unit of the Academy's museum building in Golden Gate Park, it will be fitting to review briefly the activities of the Academy during this decade with the hope that the further financial assistance for increased activity and usefulness may not be too long deferred.

Before presenting this condensed review, a word may not be out of place in appreciation of the generous endowments and bequests which have made the Academy's activities possible. These are small in the aggregate compared with some of the munificent endowments of similar institutions and colleges of learning on the Atlantic Coast and in the Middle West. There is to be noted, for example, the recent Munsey bequest of some \$20,000,000 to the Metropolitan Museum of Art at New York; the \$2,000,000 gift by Mr. J. G. Shedd of Chicago for an aquarium; \$1,000,000 endowment by Henry T. Towne of New York for a Museum of Peaceful Arts; Julius Rosenwald's \$1,000,000 toward the establishment of an Industrial Museum; and the Wilson Catherwood bequest of \$250,000 to the Zoological Society of Philadelphia, besides more than \$70,000,000 in recent years which have been placed at the disposal of universities or to be used in establishing new institutions of learning.

The endowments and bequests have, like all similar provisions for repositories of knowledge and for research, helped not alone to make for the progress of mankind, but, also, to establish that balance so essential from the economic standpoint between the producing class and the non-producers or consumers, which is every country's safeguard of continued and dependable prosperity. It is obvious that practically all outgo for scientific research gets into local circulation. It goes for the necessities of life, for food, shelter, clothing, education, recreation, transportation and what not. It goes from hand to hand at least 12 times in a year. Our little budget, for example, of \$75,000 to \$80,000 will probably account for

nearly \$1,000,000 of business annually within California, to the advantage of both middleman and producer. From the economic standpoint, therefore, the liberal endowment of such institutions as this Academy is amply justified and no more appropriate outlet for large accumulations of wealth than in the making of such endowments and bequests to worthy institutions could possibly be found.

The first large scale aid came to the Academy from James Lick, to whom it is indebted for the Market Street lot between Fourth and Fifth Streets now worth over \$800,000, the building on which produces a net annual return of about \$75,000.

Next in the order of magnitude is the Ignatz Steinhart bequest of \$250,000 for the Aquarium, to whose popularity a phenomenally large list of visitors bears ample and gratifying testimony.

Then there is a fund of \$20,000 contributed by Charles Crocker to aid in compensating those engaged in scientific studies; \$5,000 contributed by Wm. Alvord for use by the Department of Botany and a \$10,000 bequest by John W. Hendrie to assist in publishing papers on scientific subjects, besides a large number of donations for the installation of habitat groups and other exhibits ranging in amount from \$50 to over \$8,000, but which amount in the aggregate to more than \$40,000.

Among the valuable collections which have enriched the Academy's stock of material in its various departments are the following:

*Collections donated or bequeathed*

- Hemphill Collection (shells)
- John W. and Joseph Mailliard Collection (ornithological and oological)
- Kleeberger Collection (botanical)
- E. C. Van Dyke Collection (entomological)
- F. E. Blaisdell Collection (entomological)
- E. P. Van Duzee Collection (entomological)
- W. G. Wright Collection (entomological)
- W. Otto Emerson Collection (ornithological)
- John Van Denburgh Collection (ornithological and oological)
- John Van Denburgh (library)
- L. S. Smith (library)
- Barton W. Evermann (library)

*Collections purchased with contributed funds*

Edward H. Taylor (herpetological)

Prager Collection (botanical)

And now as to a summary of what has been accomplished in these recent years:

1. The first unit of the museum building of the Academy in Golden Gate Park was completed and dedicated in 1916.

2. The Steinhart Aquarium as an adjunct of the Academy's buildings in Golden Gate Park was completed and opened to the public in 1923.

3. The available 18 large-size alcoves (17 in the museum building and one in the aquarium) have been filled with high class exhibits of birds and mammals in natural environment.

4. The research collections of material in the several departments have made steady and in some departments phenomenal growth, so that, despite the almost complete loss of material in the fire of 1906, these collections are now quite notable as will appear from the following brief summary.

The Botanical Department of the California Academy of Sciences was not reestablished until 1912. From the nucleus of types saved from the great fire, the collection has grown so as to fill 81 cases, 31 of which on account of restricted space have had to be placed in the hall of the research wing of the Museum Building adjoining the Botanical Department. There are now 138,432 specimens in the herbarium, mounted, numbered and stamped. It is the most cosmopolitan collection on the Pacific Coast and is unsurpassed in its collection of the exotics which are cultivated out of doors in California and which represent plants from all parts of the world. It is considered the Pacific Coast authority on these plants and is constantly consulted. The herbarium is also rich in Alaskan and Yukon plants and probably has the best collection on the Pacific Coast. Our Californian collection is fairly complete though still surpassed by collections in other herbariums of the Pacific Coast which have had much longer time in which to accumulate material and which have had many more collectors.

Valuable additions have been made by exchange with some of the large herbariums of the world. The Royal Herbarium

at Kew, England; the National Herbarium at Washington; the Gray Herbarium, Cambridge, Mass.; the Arnold Arboretum, Jamaica Plain, Mass.; and the New York Botanical Garden have all been most generous in making exchanges.

The greatest donation was that of the Prager Herbarium, which was purchased in 1921 through the generosity of Wm. H. Crocker, Wm. F. Herrin, A. F. Morrison, J. C. Augsbury, J. D. Grant, Wm. M. Fitzhugh and Wm. C. Van Antwerp. This was one of the largest private herbariums in Germany and added about 26,000 species and over 50,000 specimens to the Academy's herbarium. This collection is especially rich in Australian, South African, Asia Minor and Arctic and European species and contains many paratypes.

Doctors Fred and Charlotte Baker donated a valuable collection which they made in Japan and China. Professor R. Kleeberger donated his herbarium, which included his own collections made in Connecticut and also a set of the Kellogg and Harford collections made in California in the 1860's. Mrs. Abbott gave the Academy her deceased husband's collection known as the Dr. E. K. Abbott collection. It is rich in specimens from Monterey County, also in a collection from France made many years ago in the region memorable as the chief seat of the world war. Valuable collections from Chile and from China have been secured by purchase. The specimens collected on the various expeditions elsewhere noted have added many species to the collection besides furnishing valuable material for exchange.

The Academy's paleontological collection was entirely destroyed in 1906. It has since then been restored to greater size. The specimens run into millions. Invertebrate paleontology of western North America is better represented in the Academy's collection than anywhere else. Much comparative material is in the collection obtained from many typical localities elsewhere in the world. The collection of organic shales, which have a definite relation to the petroleum industry, is by far the largest in existence. In the collection of type material the number of catalogued specimens of various kinds now exceeds 2000. The growth of the entire paleontological col-

lection is reported by the Curator to have made a phenomenal growth in the last ten years. Because of inadequate space in the main laboratory it has been necessary to store temporarily many hundreds of thousands of specimens in the almost inaccessible basement of the Museum building.

The Academy's ornithological collection is best developed in marine birds, shore birds and ducks and geese. The specimens of birds in the collection (skins, skeletons and alcoholics) now number 39,425. The sets of eggs number 8,991. The important accessions are as follow:

#### *Birds*

- Galapagos Exhibition, 1905-6, 868 skins.
- Dr. Louis B. Bishop, April 6, 1907, 369 skins (gift).
- California Fish and Game Commission, April 4, 1908, 102 skins (gift).
- Mr. Theodore J. Hoover, August 13, 1909, 1121 specimens (gift).
- Mrs. Alice Locke, Sept. 23, 1911, 263 specimens (purchase).
- Emerson Collection (W. H. Crocker), September 16, 1920, 706 specimens (gift).
- Emerson Collection (John W. Mailliard), September 16, 1920, 1110 specimens (gift).
- Mailliard Collection (J. & J. W. Mailliard), 10,785 specimens, 1919 (gift).
- Gulf of California Expedition, 1921, 25 specimens (exploration).
- Lower California Expedition, 1922, 126 specimens (exploration).
- Revillagigedos Expedition, 1925, 534 specimens (exploration).
- Mr. J. August Kutsche, June 21, 1921, 152 specimens from Australia and the Solomon Islands (purchase).
- Mr. C. J. Wilson, December 15, 1922, 81 specimens from the Malay Peninsula (gift).

#### *Eggs*

- Mailliard Collection (Gift of J. & J. W. Mailliard), 1919, 3,270 sets.
- Galapagos Expedition, 1905-06, 818 sets (exploration).
- Gulf of California Expedition, 1921, 511 set (exploration).
- Revillagigedos Expedition, 1925, 59 sets (exploration).
- Dr. John Van Denburgh (through Mr. Douglas Van Denburgh), November 6, 1924, 1311 sets and 16 nests (gift). Of particular value because of the 29 sets of Golden Eagle.
- Dr. Harry R. Painton, December 8, 1924, 386 sets (gift).
- The Academy possesses 1 egg of California Vulture (value \$750); 1 egg of Black Swift (value \$75); and a fine series of the eggs of the Elegant Tern and Aleutian Sandpiper. Of the last two the Academy probably possesses the finest series extant.
- Dr. G. Dallas Hanna (Pribilof collections), 769 sets (exploration).

Of Mammals there are in the Academy 5250 specimens (skins and skulls). Among the principal accessions of these are to be noted:

W. W. Price Collection, 991 skins, small mammals from Eldorado and Mono counties; and Douglas County, Nevada.

H. O. Jenkins Collection, 506, chiefly Monterey and Santa Clara counties.

Mr. A. K. Macomber, Gorilla from Belgian Congo, July 25, 1924.

Lower California Expedition, 1921, 70 specimens.

Galapagos Expedition, 1905-06, 120 specimens.

During the past ten years the Academy's Department of Entomology has grown from a small unorganized collection until it now ranks among the large collections of the country, containing approximately 500,000 specimens, and, so far as west American material is concerned, probably takes first rank, with a very large proportion of its material carefully determined and well arranged in systematic order and therefore available for comparison and study. The following valuable collections, as already noted, have recently been added to the Academy's material:

The E. C. Van Dyke Collection of over 100,000 specimens. Coleoptera.

The F. E. Blaisdell Collection of over 100,000 specimens. Coleoptera.

The E. P. Van Duzee Collection of over 30,000 specimens. Hemiptera.

John E. Carey Collection of over 900 Lepidoptera.

The Academy's collection of reptiles and amphibians has been re-built since 1906. It now numbers over 59,000 specimens and is one of the largest in America. The collection of Galapagos tortoises is the largest and most complete in existence. The collection from the Pacific Coast is unsurpassed by any other museum. The oriental collections are large and valuable.

The Academy's library, too, is notable. This now consists of an extensive and valuable collection of books, periodicals and pamphlets on all branches of natural history and related subjects.

For a fuller understanding of the work which has been accomplished by the Academy, reference should be had to its

publications, of which the enumeration elsewhere in this report of the publications in 1925 gives a fair idea. This report would become too extended to attempt a review of the published material, even though restricted to the last ten years only.

It is a pleasure to be able thus to present in condensed form the results of the Academy's activities and it is only necessary to refer to this summary to show how enthusiastic and able has been the work of the Academy's curators and their assistants. For them and for the Academy itself let me hope for further continuous and generous encouragement and support by the public whom the Academy is endeavoring to serve. To all who have in any way contributed to the Academy's activities and successes, it makes grateful acknowledgment.